



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: S. Smeeekens et al. Attorney Docket No.: ARNO114646
Application No.: 09/423,575 Group Art Unit: 1656
Filed: January 27, 2000 Examiner: S. Chunduru
Title: PLANT GENE CONSTRUCTS AND THEIR USE

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RESPONSE TO PAPER NO. 11

Seattle, Washington 98101

February 3, 2003

TO THE COMMISSIONER FOR PATENTS:

In response to the Examiner's Action mailed October 2, 2002, please reconsider the application in view of the following remarks.

Claims 1-4 are pending in this application and have been examined. Claims 1-4 stand rejected. Applicants respectfully request reconsideration and allowance of Claims 1-4.

Rejection of Claims Under 35 U.S.C. § 112, Second Paragraph

Claims 1-4 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner states that it is unclear what the phrase "ATH1 gene product" refers to. Applicants respectfully disagree. The specification clearly states that ATH1 refers to the *Arabidopsis thaliana* homeobox gene previously described in Quaedvlieg et al. (1995) *Plant Cell* 7:117-129 (Specification, page 3, lines 5-8). The sequence of the ATH1 cDNA is provided in FIGURE 1 of the Specification. The Specification further describes that gene product from the ATH1 gene may either be a sense or an antisense product (Specification, page 4, line 28, to page 6, line 8). Moreover, four different constructs comprising ATH1 gene products are described in EXAMPLE 2 (Specification, page 21, line 8, to page 24, line 24). Thus, it is clear that "ATH1" refers to a specific isolated gene and not to any gene within "the *Arabidopsis thaliana* homeobox region," as proposed by the Examiner. Therefore, applicants respectfully

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submit that the phrase "ATH1 gene product" is not indefinite and request withdrawal of this ground of rejection.

Rejection of Claims Under 35 U.S.C. § 102(e)

Claims 1-4 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,744,693 (Meyerowitz et al.). According to the Examiner, Meyerowitz et al. teach a method of transforming a plant with a construct comprising a sequence coding for a transcriptional factor of *Arabidopsis thaliana* that is equivalent to an ATH1 gene product. Applicants respectfully disagree.

A reference is anticipatory if it discloses every limitation of the claimed invention either explicitly or inherently. *Atlas Powder Co. v. IRECO, Inc.*, 51 U.S.P.Q.2d 1943, 1945 (Fed. Cir. 1999). Applicants respectfully submit that Meyerowitz et al. do not disclose every limitation of the invention of Claim 1, from which Claims 2-4 depend.

Claim 1 recites a method for modifying flowering in plants comprising transforming plants with a construct comprising a complete or partial DNA sequence coding for an ATH1 gene product that modifies flowering in the plants. The gene sequence used in the methods disclosed in Meyerowitz et al. is the agamous gene (Meyerowitz et al., Abstract). The agamous gene and the ATH1 gene are distinct genes having substantially different sequences. For example, the DNA binding domain of the protein(s) encoded by the agamous gene is a MADS box (Meyerowitz et al., Column 7, lines 36-44), whereas the DNA binding domain of the protein(s) encoded by the ATH1 gene is a homeodomain (Specification, page 3, line 5; Quaedvlieg et al. (1995) *Plant Cell* 7:117-129). Therefore, the agamous gene is not equivalent to an ATH1 gene product.

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For the reasons described above, Meyerowitz et al. do not disclose every limitation of the invention in Claim 1 and, therefore, cannot anticipate or render obvious the present invention. Accordingly, applicants respectfully request withdrawal of this ground of rejection.

Conclusion

In view of the foregoing comments, Claims 1-4 are believed to be in condition for allowance. Reconsideration and favorable action is requested.

Respectfully submitted,

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